

Release notes for ENDF/B Development n-094_Pu_246
evaluation



April 26, 2017

- psyche Warnings:

1. Non-threshold reaction with Q value differing from PSYCHE's expectations
FILE 3 / SECTION 102 / THE CALCULATED Q 4.11944E+06 DISSAGREES WITH THE GIVEN Q 4.47051E+06 (0): Iffy Q

```
FILE 3
SECTION 102
THE CALCULATED Q 4.11944E+06 DISSAGREES WITH THE GIVEN Q 4.47051E+06
```

- fudge-4.0 Warnings:

1. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

```
WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.88%
```

2. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 1 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

3. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 2 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (4.069505e-09) is too small
```

4. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (total): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

5. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (total): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

6. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 4 (n + Pu246): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

7. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 4 (n + Pu246): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

8. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission]): / Form 'eval': / Component 0 (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
9. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission]): / Form 'eval': / Component 1 (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
10. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 10 (n + (Pu246_e1 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (1.555823e-09) is too small
11. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 11 (n + (Pu246_e2 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (3.109042e-09) is too small
12. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 12 (n + (Pu246_e3 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (5.116352e-09) is too small
13. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 13 (n + (Pu246_e4 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (4.853974e-09) is too small
14. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 14 (n + (Pu246_e5 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.
- WARNING: Ratio of smallest/largest eigenvalue (1.949602e-09) is too small
15. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 15 (n + (Pu246_e6 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (6.913590e-09) is too small

16. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 16 (n + (Pu246_e7 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (3.582186e-09) is too small

17. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 17 (n + (Pu246_e8 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (3.607562e-10) is too small

18. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 18 (n + (Pu246_e9 ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (2.716439e-09) is too small

19. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 19 (n + (Pu246_c ->Pu246 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

20. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 20 (Pu247 + gamma): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

21. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 20 (Pu247 + gamma): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

22. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 21 (n + Pu246 [angular distribution]): / Form 'eval': (Error # 1): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

23. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 22 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

24. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 23 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

25. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 24 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

26. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 25 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

- **fudge-4.0 Errors:**

1. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (155635.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

2. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (155635.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

```
WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

```
WARNING: Domain doesn't match the cross section domain: (500000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

```
WARNING: Domain doesn't match the cross section domain: (700000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

```
... plus 5 more instances of this message
```

3. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

4. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (500000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
```

5. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (700000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
6. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1100000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
7. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1044260.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
8. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (900000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
9. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1300000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
10. Energy range of data set does not match cross section range
reaction label 10: n + (Pu246_c ->Pu246 + gamma) / Product: Pu246_c / Decay product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (1100000.0 -> 20000000.0) vs (115945.0 -> 20000000.0)
11. Calculated and tabulated Q values disagree.
reaction label 11: n[multiplicity:'2'] + Pu245 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6104905.302307129 eV vs -5.7822e6 eV!
12. Calculated and tabulated Q values disagree.
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10875709.2442627 eV vs -1.0553e7 eV!
13. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (11500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)
14. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (11500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

15. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (11500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

16. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (11500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

17. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (11500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

18. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (11500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

19. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

20. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

21. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

22. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

23. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

24. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12000000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

25. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

26. Energy range of data set does not match cross section range
reaction label 12: n[multiplicity:'3'] + Pu244 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12500000.0 -> 20000000.0) vs (10596300.0 -> 20000000.0)

27. Calculated and tabulated Q values disagree.
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -16896980.60269165 eV vs -1.65743e7 eV!

28. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

29. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

30. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

31. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

32. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

33. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

34. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

35. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (17500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

36. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

37. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

38. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

39. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

40. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

41. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

42. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

43. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_h / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

44. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

45. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_i / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

46. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_j / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

47. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_j / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

48. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_k / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

49. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_k / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

50. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_l / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

51. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_l / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

52. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_m / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

53. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_m / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

54. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_n / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

55. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_n / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

56. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_o / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

57. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_o / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

58. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_p / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

59. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_p / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

60. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_q / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

61. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_q / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

62. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_r / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

63. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_r / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

64. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_s / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

65. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_s / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

66. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_t / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

67. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_t / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

68. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_u / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

69. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_u / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

70. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_v / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

71. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_v / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

72. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_w / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

73. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_w / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

74. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_x / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

75. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_x / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

76. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_y / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

77. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_y / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

78. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_z / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

79. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_z / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

80. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_aa / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

81. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_aa / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

82. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ab / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

83. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ab / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

84. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ac / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

85. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ac / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

86. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ad / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

87. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ad / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

88. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ae / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

89. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ae / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

90. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_af / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

91. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_af / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

92. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ag / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

93. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ag / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

94. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ah / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

95. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma_ah / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

96. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{ai} / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

97. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{ai} / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

98. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{aj} / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18000000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

99. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{aj} / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

100. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{ak} / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

101. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{ak} / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

102. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{al} / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

103. Energy range of data set does not match cross section range
reaction label 13: n[multiplicity:'4'] + Pu243 + gamma / Product: gamma__{al} / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (16642200.0 -> 20000000.0)

104. Calculated and tabulated Q values disagree.
reaction label 15: Pu247 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 4148036.147583008 eV vs 4470510. eV!

105. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 12: $n + (Pu246_c \rightarrow Pu246 + \gamma)$ total gamma multiplicity
 (Error # 0): summedMultiplicityMismatch
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 42.38%
106. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 13: $n[multiplicity:'3'] + Pu244 + \gamma$ total gamma multiplicity
 (Error # 0): summedMultiplicityMismatch
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 99.98%
107. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 14: $n[multiplicity:'4'] + Pu243 + \gamma$ total gamma multiplicity
 (Error # 0): summedMultiplicityMismatch
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 63.18%
108. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 0: $/reactionSuite/fissionComponents/fissionComponent[@label='0']$
 (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 230152173406.2194 eV vs 1.997074e8 eV!
109. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 1: $/reactionSuite/fissionComponents/fissionComponent[@label='1']$
 (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 230152173406.2194 eV vs 1.997074e8 eV!
110. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 2: $/reactionSuite/fissionComponents/fissionComponent[@label='2']$
 (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 230152173406.2194 eV vs 1.997074e8 eV!
111. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 3: $/reactionSuite/fissionComponents/fissionComponent[@label='3']$
 (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 230152173406.2194 eV vs 1.997074e8 eV!
112. A covariance matrix was not positive semi-definite, so it has negative eigenvalues.
 $Section 21 (n + Pu246 [angular distribution]): / Form 'eval': / LegendreLValue L=1 vs 1$ (Error # 0): Bad evs

WARNING: 10 negative eigenvalues! Worst case = -9.488037e-05

- njoy2012 Warnings:

- Evaluation has no resonance parameters given
 $unresr...calculation of unresolved resonance cross sections (0): No RR$

```
---message from unresr---mat 9458 has no resonance parameters
copy as is to nout
```

2. In some evaluations, the partial fission reactions MT=19, 20, 21, and 38 are given in File 3, but no corresponding distributions are given. In these cases, it is assumed that MT=18 should be used for the fission neutron distributions.
heatr...prompt kerma (0): HEATR/hinit (3)

```
---message from hinit---mt19 has no spectrum
          mt18 spectrum will be used.
```

3. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (1): HEATR/hinit (4)

```
---message from hinit---mf6, mt 16 does not give recoil za= 94245
          one-particle recoil approx. used.
```

4. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (2): HEATR/hinit (4)

```
---message from hinit---mf6, mt 17 does not give recoil za= 94244
          one-particle recoil approx. used.
```

5. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (3): HEATR/hinit (4)

```
---message from hinit---mf6, mt 37 does not give recoil za= 94243
          one-particle recoil approx. used.
```

6. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (4): HEATR/hinit (4)

```
---message from hinit---mf6, mt 51 does not give recoil za= 94246
          one-particle recoil approx. used.
```

7. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (5): HEATR/hinit (4)

```
---message from hinit---mf6, mt 52 does not give recoil za= 94246
          one-particle recoil approx. used.
```

8. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (6): HEATR/hinit (4)

```
---message from hinit---mf6, mt 53 does not give recoil za= 94246
          one-particle recoil approx. used.
```

9. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (7): HEATR/hinit (4)

```
---message from hinit---mf6, mt 54 does not give recoil za= 94246
          one-particle recoil approx. used.
```

10. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (8): HEATR/hinit (4)

```
---message from hinit---mf6, mt 55 does not give recoil za= 94246
          one-particle recoil approx. used.
```

11. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (9): HEATR/hinit (4)

```
---message from hinit---mf6, mt 56 does not give recoil za= 94246
one-particle recoil approx. used.
```

12. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (10): HEATR/hinit (4)

```
---message from hinit---mf6, mt 57 does not give recoil za= 94246
one-particle recoil approx. used.
```

13. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (11): HEATR/hinit (4)

```
---message from hinit---mf6, mt 58 does not give recoil za= 94246
one-particle recoil approx. used.
```

14. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (12): HEATR/hinit (4)

```
---message from hinit---mf6, mt 59 does not give recoil za= 94246
one-particle recoil approx. used.
```

15. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (13): HEATR/hinit (4)

```
---message from hinit---mf6, mt 91 does not give recoil za= 94246
one-particle recoil approx. used.
```

16. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (14): HEATR/hinit (4)

```
---message from hinit---mf6, mt102 does not give recoil za= 94247
photon momentum recoil used.
```

17. There is a problem with the fission energy release.
heatr...prompt kerma (23): HEATR/nheat (3)

```
---message from nheat---changed q from 1.997074E+08 to 1.888468E+08
for mt 18
```

18. Evaluation has no resonance parameters given
purr...probabalistic unresolved calculation (0): No RR

```
---message from purr---mat 9458 has no resonance parameters
copy as is to nout
```

19. The number of coefficients was too large in a covariance
covr...process covariance data (1): Cov:Too many coeff.

```
---message from matshd--- 280 coefficients > 2
reset and continue
```